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Does waiving preventive food control inspections in Finland weaken the prerequisites for safe food handling in restaurants?

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ABSTRACT

Finnish food control authorities waived pre-inspections of food premises in 2011, leaving food business operators to begin operating with no pre-operation food control. This study aims to investigate the effects of this food policy change on the preconditions for Good Hygienic Practices (GHPs) on food premises. Of the 916 food premises that were included in this study, 379 were pre-approved whereas 537 merely notified their operations. The results show that notified food service premises (restaurants) preparing food displayed significantly more non-compliance pertaining to infrastructure than did restaurants pre-approved for food preparation (11.5% and 1.8% of the premises, respectively) ($p < 0.05$). Significant differences also emerged in the number of premises with non-compliance pertaining to cleaning facilities and equipment, and marked differences in the adequacy of hand and other washing sites. Such instances of non-compliance weaken the preconditions for GHPs. The results suggest that re-introducing pre-inspections of restaurants would strengthen the preconditions for GHPs and possibly provide a model for other countries with similar food control systems.

1. Introduction

Food premises in the European Union (EU) must be registered (notified) or pre-approved by the national food control authority depending on the type of premises (EC 882/2004). EU legislation allows notification for all food premises other than establishments that handle products of animal origin before retail as well as certain sprout-producing premises (EC 882/2004; EU 210/2013). Premises to be pre-approved must pass an inspection by a food control inspector (inspector) before beginning of operation, whereas notified premises can begin operating with no pre-inspection (EC 882/2004). Some EU member states, such as the United Kingdom (FVO, 2013a), Germany (FVO, 2013b), Sweden (FVO, 2014a) and Belgium (FVO, 2014b), register retail food premises. Finland also began registering retail food premises in September 2011 (Amendment of Finnish Food Act, 352/2011). The purpose of the amendment to the Food Act was to reduce bureaucracy and to facilitate the establishment of new food businesses (Government bill on the amendment of the Food Act 293/2010).

Before the amendment of the Food Act, a food business operator (FBO) applied for approval and an inspector conducted an on-site inspection before operations began in order to ensure that the food premises are suited to the intended operation (Finnish Food Act 23/2006). If the premises failed to meet the food safety requirements, the premises either were denied approval or were approved conditionally (e.g., operations were limited until the FBO had corrected any non-compliance) (Finnish Food Act 23/2006). The shift from pre-control to post-control is a major principal change that may affect how food premises meet food safety requirements and assure food safety. To our knowledge, no studies have examined the effects of this shift from pre-to post-control of the compliance of food premises with food safety requirements.

The FBO must take into account both infrastructure and operational prerequisites when establishing a food business (EC 852/2004; Finnish Food Act 23/2006). Before the amendment of the Food Act, the FBO could receive guidance concerning the requirements during pre-inspection (Finnish Food Act 23/2006), but now no pre-inspections take place unless the FBO specifically requests an inspection. This change has not only increased the importance of the FBO's own knowledge of food safety requirements, but also emphasises the FBO's responsibility for food safety, which is in line with the principle of EU food safety legislation (EC 178/2002). However, this situation has also raised concerns about whether the notified food premises will meet the food

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safety requirements poorer than the approved food premises at the time the operations begins, leading to food safety risk (Finnish Veterinary Association, 2011).

The abandonment of obligatory pre-inspections has raised special concerns about compliance concerning infrastructure, such as the suitability of the space intended for the establishment's operations (Finnish Veterinary Association, 2011). With no obligatory pre-inspection, preconditions for GHPs may be unsatisfactory until the first inspection. The results of previous studies showing that some FBOs have inadequate knowledge of food safety requirements (Allwood et al., 2004; Bolton, Meally, Blair, McDowell, & Cowan, 2008; Läikkö-Roto & Nevas, 2014; Pichler, Ziegler, Aldrian, & Allerberger, 2014) and receive inspectors' guidance deepen concerns even further (Nevas, Kalenius, & Lundén, 2013; Yapp & Fairman, 2006). Advice and education concerning non-compliance such as hand washing, cross-contamination and infected workers are important because studies have shown instances of non-compliance on food premises to lead to foodborne outbreaks (EFSA, 2015; Evira, 2012). Research has also shown issues related to infrastructure such as inadequate space of the food premises to lead to outbreaks (Zoonosis Center, 2015) or to associate with restaurant outbreaks (Buchholz, Run, Kool, Fielding, & Mascola, 2002; Petran, White, & Hedberg, 2012).

The Finnish Food Safety Authority (Evira) in Finland has instructed inspectors to carry out the first inspection of the notified premises at one, three or six months after the notification depending on the notified operation's food safety risks (Evira, 2015a). Since possible non-compliance in infrastructure may be found after the FBO has already begun operations, correcting non-compliance might be more difficult than it would have been before operations began. It is therefore anticipated that food control authorities must use more enforcement measures, such as orders or prohibitions, than before in order to maintain food safety (Lundén, 2013).

The overall aim of this study was to evaluate whether the shift of food control towards post-control weakened the preconditions for GHPs in food premises. To do so, this study investigated the compliance of pre-approved and notified food premises with food safety requirements with a special focus on infrastructure. In addition, this study also aimed to evaluate whether the shift in food control influenced the use of enforcement measures on food premises and to offer possible suggestions for improving food control measures.

2. Material and methods

2.1. Food premises

We collected the data from four large food control units in both urban and rural areas of southern Finland. The data included 916 food premises, of which 379 were pre-approved and 537 notified. The pre-approved food premises had been established between 2007 and 2011 before the amendment of the Food Act, and notified food premises between 2011 and 2013, after the amendment. The data included all newly established food premises or premises that had undergone major changes requiring approval or notification. We categorised the premises into six groups according to the type of operations (Table 1). We further categorised food service premises (restaurants) into restaurants that prepared and served foods (restaurants with preparation) and restaurants that engaged only in minor food handling (e.g., reheating) and serving.

2.2. Food control data

The material comprised food control data of the premises, including decisions on approval and enforcement measures, inspection reports and documented communication between the inspector and the FBO. After operations began, the study included a maximum of two inspection reports.

2.3. Classification of guidance concerning non-compliance

We categorised guidance concerning an FBO's non-compliance into 22 topics (Table 2) and specifically identified non-compliance concerning infrastructure based on the inspectors' findings. Inspectors applied EU regulation (EC 852/2004) and national legislation (Finnish Food Act 23/2006) when carrying out the inspections. Non-compliance concerning infrastructure was defined as non-compliance requiring reconstruction or new constructional measures on the premises or fixed equipment.

2.4. Statistical analysis

We analysed the data with SPSS 22 (IBM SPSS Software) and used Fisher's exact test to evaluate the significance of differences in the amount of guidance concerning non-compliance between pre-approved and notified food premises. We set statistical significance at $p < 0.05$.

3. Results

3.1. Guidance given by inspectors

Notified premises operated in average 110 days before receiving guidance on-site (Table 3). Pre-approved premises received guidance in 20 categories and notified premises in all 22 categories after beginning operations (Table 2). Guidance related to non-compliance concerning infrastructure was significantly higher for notified premises than for pre-approved ones. Of all guidance provided, 7.6% and 12.5% related to infrastructure at pre-approved and notified premises, respectively, after operation began ($p < 0.05$).

Instances of non-compliance concerning infrastructure occurred significantly more often in the categories of cleaning facilities and equipment (e.g., cleaning facilities were missing or had to be rebuilt) and space requirements (e.g., the space was too small for its intended purpose) in notified premises ($p < 0.05$) (Table 2). In some categories, such as air conditioning, however, non-compliance related to infrastructure was higher at pre-approved than at notified premises, but the difference was not significant ($p > 0.05$).

Examining premises according to their type of operation revealed that non-compliance concerning infrastructure in cleaning facilities and equipment was significantly more often present at notified restaurants than at pre-approved restaurants ($p < 0.05$) (10.9% and 1.9%, respectively). Non-compliance concerning space requirements was also significantly higher at notified restaurants with preparation than at pre-approved with preparation ($p < 0.05$) (Table 4). Non-compliance concerning space requirements was also an issue in notified and pre-approved retail food shops (food shops) (5.2% and 2.4%, respectively) and warehouses (5.3% and 0%, respectively), but the differences were not statistically significant.

Examinations in operational prerequisites, such as self-inspection systems, revealed non-compliance after operations had begun in many pre-approved and notified premises (64.4% and 68.6%, respectively) (Table 2). In some operational prerequisites, non-compliance was observed more often in pre-approved premises (e.g., cleaning of premises and equipment) than in notified premises (54.0% and 33.8% of premises,